

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Carl T. Nelson

Serial No.

Filed : Herewith

As a Continuation of Application

Serial No. : 932,158

Filed : November 18, 1986

For : SWITCHING VOLTAGE REGULATOR CIRCUIT

Examiner : Kristine Peckman

Group Art Unit : 212

New York, New York 10022-6250
July 31, 1987

Hon. Commissioner of Patents
and Trademarks
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, applicant hereby makes the following of record in the above-identified application:

1. Data sheet, "Switching DC-To-DC Microconverters -- LSH 6300 SERIES", date unknown;
2. Data sheet, Unitrode UC 1846 Current Mode PWM Controller integrated circuit, 12/83;
3. Documents relating to the Linear Technology Corporation LT-1070 integrated circuit.

Copies of the aforementioned documents, which are listed on the accompanying Form PTO-1449 (modified), are enclosed herewith. Pursuant to MPEP § 609, applicant respectfully requests that a copy of Form PTO-1449 (modified), as considered and initialled by the Examiner, be returned to the undersigned with the next communication.

It is respectfully requested that the foregoing documents be (1) fully considered by the Patent and Trademark Office during examination of this application, and (2) printed on any patent which may issue on this application.

Applicant expressly reserves the right to establish, pursuant to 37 C.F.R. § 1.131 or otherwise, that any one or more of the above-listed documents are not prior art to this application.

Discussion of the Cited References

Lambda LSH 6300 Data Sheet

The data sheet entitled "Switching DC-To-DC Microconverters -- LSH 6300" relates to the Lambda 6300 series switching regulator integrated circuit. The data sheet describes that the LSH 6300 series is available in packages having 5 pins (including: V_{sense} , E_O , Gnd, Power Gnd and V_{in}) or 9 pins. The data sheet states that the 9-pin version of the device can be used to provide an electronic shutdown facility.

Unitrode UC 1846 Data Sheet

The Unitrode UC 1846 data sheet relates to the Unitrode UC 1846 family of integrated circuit switching voltage regulators. The data sheet describes the UC 1846 as a current mode switching regulator having 16 pins. As shown by the block diagram in the data sheet (page 3-108), pin 16 ("shutdown") may be used to shut down the circuit by forcing off the outputs (pins 11 and 14). Pin 16, however, does not place the UC 1846 in a "sleep mode" in which the current drawn by the device is reduced to a low level. Pin 1 ("current limit adjust") of the UC 1846 may be used to provide soft-starting or current limiting.

Linear Technology LT-1070

The accompanying declarations of Nello Sevastopoulos, Derrick Berry, Hans J. Zapf and Robert C. Scott set forth facts relating to an integrated circuit known as the LT-1070, currently being marketed by Linear Technology Corporation, the assignee of the above-identified patent application. The LT-1070 incorporates applicant's invention.

As the Sevastopoulos, Berry, Zapf and Scott declarations establish, the LT-1070 was not in public use or on sale in this country more than one year prior to the filing date of this application. However, certain technical information regarding the as yet unannounced LT-1070 was provided to others prior to November 18, 1985.

In particular, a number of viewgraphs relating to the LT-1070 were displayed to, and discussed with, (1) engineers employed by Standard Radio and Telephone in Sweden on October 29, 1985 (Sevastopoulos Decl. ¶¶3-9), and (2) LTC independent European distributors in Paris, France on November 6, 1985 (Zapf Decl. ¶¶3-7). Also, a poster relating to the LT-1070 was displayed at a trade show in Paris, France on November 4-8, 1985 (Sevastopoulos Decl. ¶10). None of these events or documents, however, renders applicant's invention unpatentable.

An early and favorable action is respectfully requested.

Respectfully submitted


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